ATTACHMENT 7

Statement of Justification
Commission Permit and Special Exception Application for
Future Water Storage in an Existing Quarry (Water Storage Tank)
Parcel 29 (TM 61; MCPI# 114-25-6156)
Loudoun Water - Applicant
June 1, 2009

Summary of Project Proposal

Loudoun Water (Applicant) proposes to use "Quarry A" (Property), an existing diabase rock quarry totaling 33.77 acres for water storage once mining operations are completed. This quarry comprises the special exception application area and is part of the 80.61-acre Parcel 29 located to the east of Goose Creek and north of the W&OD Trail. Other quarry- related commercial uses are located on the same parcel to the east and are not included in this special exception application.

Parcel 29 is zoned MR-HI as are adjacent parcels to the north and south, beyond the W&OD Trail. Existing residential and non-residential structures are located to the north while a second quarry, "Quarry B", is located to the south. Goose Creek is located between 70/150 feet west of the Property and forms the western boundary of Parcel 29. Jack Pit Lane, a private road, provides access to the Property from Belmont Ridge Road, Rt. 659 farther to the east.

Quarries A and B are part of Luck Stone Corporation's Leesburg Plant mining operation which also includes an approved, future quarry to the west, across Goose Creek. Loudoun Water has an agreement with Luck Stone Corporation to utilize Quarry A for water storage when mining operations have been completed, currently estimated to be in the 2017-2020 timeframe. Quarry A is a key component of Loudoun Water's Central Water Supply Program, as described below, and it provides the potential for Loudoun Water to store up to 1 billion gallons of water for future use in the area served by the Central Water Supply System.

Background

Loudoun Water's Long-Range Planning Efforts to Satisfy Anticipated Needs for the Central Water Supply System

Loudoun Water currently provides public water to residential and non residential customers within an area identified by Loudoun County as the Central Water Supply System (See Exhibit 1). Loudoun Water obtains 57 million gallons per day (MGD) of water to serve this area from Fairfax Water and the City of Fairfax. Loudoun County land use plans and related demographic projections have been used by Loudoun Water to forecast that more water will be needed to meet future demand in the Central Water Supply System by 2035-2040 (total estimate needed: 90 MGD) even as efforts continue to reduce peak demands through implementation of a wise water use program and proactive demand management strategies. On December 11, 2008, the Loudoun Water Board of Directors gave approval for the proposed Potomac River Water Supply and Raw Water Storage Program ("Central Water Supply Program"), a two-phased program to meet current and projected needs for the next 30 years by withdrawing raw, non-potable water directly from the Potomac River, storing it for future use in existing quarries, and processing finished drinking water at a new water treatment facility.

Loudoun Water's Central Water Supply Program

The Loudoun Water Board of Directors' action was a culmination of years of effort that included long-range planning, alternatives analysis, negotiation between potential partners and outreach to community interests. Alternatives included increasing the amount of water purchased from Fairfax Water, and the purchase and upgrade of an existing water treatment plant owned and operated by the City of Fairfax.

Fairfax Water utilizes an integrated system to provide Loudoun Water up to 50 MGD of water from the Potomac River and the Occoquan Reservoir. This system provides a dependable source of water and was evaluated as an alternative to the proposed water storage option. However, significant costs are associated with the water volume necessary to meet Loudoun County's needs and include the cost of upgrading Fairfax Water's existing intake on the Potomac River, extending and additional 35 miles of finished water lines through both developed and natural areas of Loudoun and Fairfax Counties (instead of the of the 8 miles contemplated with the proposed Central Water Supply Program) and incurring ongoing operating costs of a system that requires the pumping of water between elevations that differ by as much as 340 feet.

The City of Fairfax obtains water from the Goose Creek Reservoir and existing agreements allocate up to 7 MGD to Loudoun Water as available. Droughts in recent years have diminished stream flow in Goose Creek, however, and Loudoun Water has only been able to reliably depend upon 3 MGD from this source. While Loudoun Water has approached the City with offers to purchase and upgrade the existing water treatment plant, the City remains committed to ownership and operation of its own water treatment facility.

Loudoun Water could construct a water treatment plant on land it owns along the Potomac River, to the west of the River Creek community. However, development constraints associated with this property as well as its size (less than half the acreage of the proposed site) limits the amount of open space that can be used to augment minimum buffer requirements along the property's boundary, next to existing residential development. Moreover, the parcel is not located near current and future Loudoun Water customers who will need to be served by the expanded water supply. Nor is it located in proximity to raw water storage sites and finished water storage tanks that are part of the Central Water Supply System.

Loudoun Water's decision to build its own Potomac River water supply, to better locate its future water treatment plant near an existing/future customer base, and to utilize quarries for water storage was made in light of the factors cited above.

Components of the Central Water Supply Program

Loudoun Water's Central Water Supply Program consists of individual components: a raw water intake and pump station at the Potomac River, a water treatment plant on the Property, and raw water storage (Water Banking – see below) in one or more quarries owned by Luck Stone Corporation that are located in between the two other components. Exhibit 2 is provided for illustrative purposes only, to portray the manner in which components of the proposed Central Water Supply Program relate to each other and to other quarry sites that may provide potential opportunities for Water Banking opportunities in the future.

<u>Raw Water Intake and Pump Station</u>
The Central Water Supply Program includes a water intake to be located in the Potomac River and on a 23 acre riverfront property that Loudoun Water acquired in 1993. Raw water will be pumped from the river and conveyed to the remaining components of the system. Revised General Plan policy recommends that Loudoun Water may provide its own water supply option

along the Potomac River. Use of this parcel for an intake was shown on an approved concept plan associated with the River Creek rezoning (ZMAP 1989-0015), and the pump station that is part of the intake component is permitted as a by-right use per the Loudoun County Zoning Ordinance. As a result, neither a commission permit nor a special exception is required for this use. However State and Federal permits are required for the intake and other system components, and these will be obtained.

Water Banking: Raw Water Storage in Existing Quarries

Key to the Central Water Supply Program is a unique concept described as Water Banking; using retired quarries that have been fully mined for water storage. Raw, non potable water is deposited in the quarries during times when Potomac River flows are normal to high, and then withdrawn in lieu of continued withdrawals from the river during times of drought or excess turbidity. In this way sufficient water can be treated to serve the demands of Central Water Supply System customers without impacts to the river or to the water supply needs of other jurisdictions.

Loudoun Water's public/private partnership and business agreements with Luck Stone are instrumental to implementing the Water Banking concept. Four quarries situated in proximity to each other as well as to Loudoun Water's proposed water treatment plant afford the opportunity to store up to eight billion gallons of water and minimize Loudoun Water's withdrawals from the Potomac during less optimal times. An agreement between Loudoun Water and Luck Stone provides Loudoun Water the opportunity to use Luck's quarry located north of the W&OD Trail and east of Goose Creek ("Quarry A") for Water Banking, and this quarry is the subject of a companion special exception. It is anticipated that approximately 1 billion gallons of water will be able to be stored in this quarry alone once mining operations are complete in the 2017-2020 timeframe. In this manner, Loudoun Water will be able to use quarries for a beneficial public purpose.

Water Treatment Plant

The Central Water Supply Program envisions a water treatment plant being constructed on the Property in two phases. Phase I will result in the construction of a 20 MGD facility by approximately 2015 to serve the short term water needs of the Central Water Supply System. The fully expanded 40 MGD facility will provide for future needs to the 2035-2040 timeframe. Water from either the Potomac River or Water Banking site(s) will be processed into finished drinking water at the treatment facility. From there it will enter the Central Water Supply System via a finished water line that extends under Goose Creek to an existing water line along Belmont Ridge Road, Rt. 659, connecting to local water lines and to Loudoun Water's Broadlands and Brambleton water tanks located approximately 1.6 and 4 miles to the south, respectively.

Comprehensive Plan and Policy Considerations Relative to the Proposed Commission Permit and Special Exception; Compliance with Plan Objectives

The Property is located in the Suburban Policy Area per the Loudoun County Revised General Plan. Quarries in the Suburban Policy Area are governed by the Green Infrastructure Policies of the Plan, and those policies specifically recommend that the County encourage the innovative and sensitive reuse of quarries and resource extraction sites (Chapter 5, Mineral Resource Extraction Policy #8. In 2008, Loudoun County's Environmental Policy and Program Assessment recognized that quarries could be converted for water storage purposes (page 66).

- *Compliance with Plan Policies: Use of the Property for water storage is an opportunity to reclaim Quarry A for a beneficial public purpose once mining operations have been completed.*

The Revised General Plan recommends that Loudoun Water continue to be responsible for the provision and extension of public water service in the Suburban Policy Area and Transition Policy Area (Chapter 2, General Water/Sewer Policy # 7). It notes that other water supply options to those that already exist (i.e. water from Fairfax City and Fairfax Water) can be considered for the Suburban and Transition Policy Areas (Chapter 2, General Water Policy #2). A Potomac River water facility is an identified option. The Plan includes a recommendation for the County and Loudoun Water to cooperate in developing long-range plans for water supply and impoundment sites (General Water Policy #6).

- *Compliance with Plan Policies: The proposed use supports Loudoun Water's responsibility to insure the adequate and efficient supply of water for the Central Water Supply System that serves the Suburban and Transition Policy Areas of the County. Water from the Potomac River will be stored in accordance with Loudoun Water's adopted Potomac River Water Supply Program as described above.*

The Revised General Plan notes that open space is to be located so as to create and supplement a 300 foot buffer along Goose Creek (Community Design Policy #13; Scenic Rivers and Potomac River Policy #1).

- *Compliance with Plan Policies: The water feature that will result once Quarry A is reclaimed in accordance with the proposed use will supplement the Plan-recommended Goose Creek no-build buffer and will provide a predominant visual element that can be enjoyed by pedestrians and bicyclists who travel along the W&OD Trail.*

Zoning and Related Conditions Relative to the Proposed Water Storage Facility

The Property has been a quarry since the 1880's and it became an unintended water impoundment area when Hurricane Agnes caused Goose Creek to overflow its boundaries and flood quarry in 1972. The water remained in the quarry for approximately twenty-five years until Luck Stone Corporation pumped the water out in order to resume mining operations.

Use of the Property for water storage will become effective only after mining operations have ceased. At that time the quarry cavity will have the potential to hold over one billion gallons of water. Exhibit 3 illustrates the status of the Quarry A mining operation in early 2008, the manner in which the quarry will be mined over time, and the total water volume that can be anticipated upon completion of quarry operations. Luck Stone estimates that it will take between eight and eleven years to fully mine the Property.

Welded wire black fencing will be provided around the perimeter of the Property. This type of fencing provides for necessary security for the water supply and a safety measure for the general public while maintaining full visibility of this amenity from the W&OD Trail.

The use of a quarry for water storage meets the Zoning Ordinance definition for a "water storage tank" as it is an ".... other facility for the storage of water for supply to a water system". The proposed use also complies with the provisions of Sec. 6-1310 of the Zoning Ordinance as follows:

(A) Whether the proposed special exception is consistent with the Comprehensive Plan.

- *Response: Specific references to Plan compliance have been cited in the section entitled "Comprehensive Plan and Policy Considerations Relative to the Proposed Commission Permit and Special Exception; Compliance with Plan Objectives". Use of the Property for water storage is an opportunity to reclaim an existing quarry once mining operations*

have been completed and to do so in a way that supports the Plan's public water supply policies. Reclaiming the quarry for water storage will also create a water feature within and beyond the Plan recommended Goose Creek Scenic River buffer area that will be a predominant visual element when viewed by pedestrians and bicyclists from the W&OD Trail.

(B) Whether the proposed special exception will adequately provide for safety from fire hazards and have effective measures of fire control.

Response: *By the very nature of the proposed water storage use, fire hazards and fire control should not be a concern.*

(C) Whether the level and impact of any noise emanating from the site, including that generated by the proposed use, negatively impacts the uses in the immediate area.

Response: No noise impacts are anticipated from the proposed water storage use.

(D) Whether the glare or light that may be generated by the proposed use negatively impacts uses in the immediate area.

Response: Lighting will be provided for safety and security measures only. Lighting will be directed downward so as to reduce glare and spillover unless safety and security measures dictate otherwise.

(E) Whether the proposed use is compatible with other existing or proposed uses in the neighborhood, and adjacent parcels.

Response: The proposed water storage facility will be compatible with uses on adjacent parcels.

(F) Whether sufficient existing or proposed landscaping, screening and buffering on the site and in the neighborhood to adequately screen surrounding uses.

Response: Landscaping, screening and buffering will be provided per Zoning Ordinance requirements. No visual impacts are anticipated. Rather, the water feature that will be created on the Property is anticipated to become a visual amenity.

(G) Whether the proposed special exception will result in the preservation of any topographic or physical, natural, scenic, archaeological or historic feature of significant importance.

Response: None of the above-cited features exist because the Property is a stone quarry and the site of an active mining operation.

(H) Whether the proposed special exception will damage existing animal habitat, vegetation, water quality (including groundwater) or air quality.

Response: The proposed use will not damage these features because the Property is a stone quarry and the site of an active mining operation.

(I) Whether the proposed special exception at the specified location will contribute to or promote the welfare or convenience of the public.

Response: The proposed use will promote the general public welfare by insuring that a sufficient supply of water is available to meet current and projected demands for water in

the Central Water Supply System, and that it is done in the most cost effective manner for the benefit of Loudoun Water customers who obtain water through that system.

(J) Whether the traffic expected to be generated by the proposed use will be adequately and safely be served by roads, pedestrian connections and other transportation services.

Response: Anticipated traffic generated by the proposed water storage use is minimal, estimated to be an average of one trip per day from Belmont Ridge Road when water is being stored or withdrawn from the quarry. Pedestrian access within the Property will not be permitted for security reasons. However views of the water storage area will be an amenity to pedestrians and bicyclists using the W&OD Trail.

(K) Whether, in the case of existing structures proposed to be converted to uses requiring a special exception, the structures meet all code requirements of Loudoun County.

Response: The Property is an actively mined stone quarry. None of the mining-related structures will be converted under the proposed use.

(L) Whether the proposed special exception will be served adequately by essential public facilities and services.

Response: The proposed water storage use does not require public facilities and services. Water lines to and from the facility will be extended by Loudoun Water as necessary to connect the water storage use to other Central Water Supply Program components.

(M) The effect of the proposed special exception on groundwater supply.

Response: Groundwater impacts are not anticipated with the water storage use because of the dense nature of the remaining diabase rock that will line the quarry cavity. Any existing fissures will be properly sealed prior to water storage activity.

(N) Whether the proposed use will affect the structural capacity of the soils.

Response: The proposed use will not affect the structural capacity of the rock that remains after quarry operations have been completed.

(O) Whether the proposed use will negatively impact orderly and safe road development and transportation.

Response: The proposed use will not negatively impact orderly and safe road development and transportation. Vehicle trips will average one trip per day during those times when water is either being pumped to or withdrawn from the facility.

(P) Whether the proposed special exception use will provide desirable employment and enlarge the tax base by encouraging economic development activities consistent with the Comprehensive Plan.

Response: The proposed water treatment facility is a public use which will not, in and of itself, enlarge the tax base. However it will provide employment opportunities during the time it is being reclaimed for the proposed use.

(Q) Whether the proposed special exception considers the needs of agriculture, industry, and businesses in future growth.

Response: The proposed use will more effectively provide for the future water supply needs of industry and business in the areas served by the Central Water Supply System.

(R) Whether adequate on and off-site infrastructure is available.

Response: Waterlines will connect the proposed water storage facility to a planned intake on the Potomac River and a proposed water treatment plant that is the subject of a companion special exception application.

(S) Any anticipated odors which may be generated by the uses on site, and which may negatively impact adjacent uses.

Response: No odors will be generated by the proposed use.

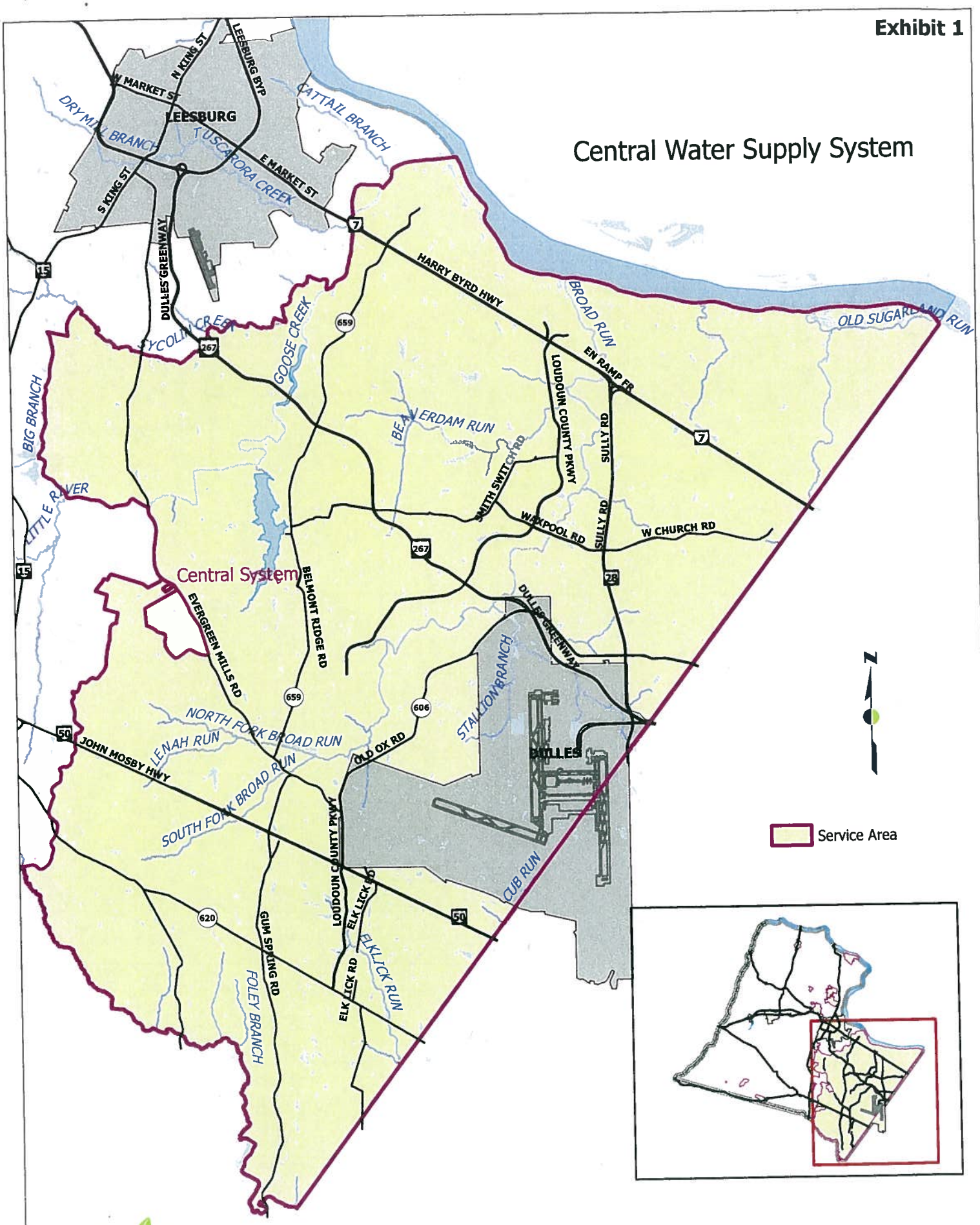
(T) Whether the proposed special exception uses sufficient measures to mitigate the impact of construction traffic on existing neighborhoods and school areas.

Response: There will be limited construction activity associated with the proposed use.

Conclusion

For the reasons cited above, use of the Property for water storage is appropriate, particularly in light of Revised General Plan recommendations which encourage the innovative reuse of existing quarries and in light of Loudoun Water's responsibility to provide an adequate supply water to the Central Water Supply System in the most effective and cost efficient manner possible.

Exhibit 1


Central Water Supply System
LEESBURG
N KING ST
W MARKET ST
E MARKET ST
S KING ST
LEESBURG BYP
DRY MILL BRANCH
TUSCARORA CREEK
CATTAIL BRANCH
DULLES GREENWAY
HARRY BYRD HWY
EN RAMP FR
BROAD RUN
OLD SUGARLAND RUN
GOOSE CREEK
SYCOLIN CREEK
BEAVERDAM RUN
BIG BRANCH
LITTLE RIVER
LOUDOUN COUNTY PKWY
SULLY RD
SMITH SWITCH RD
W POOLE RD
W CHURCH RD
Central System
EVERGREEN MILLS RD
BELMONT RIDGE RD
STALLION BRANCH
NORTH FORK BROAD RUN
LENAH RUN
JOHN MOSBY HWY
OLD OX RD
DULLES
SOUTH FORK BROAD RUN
CUB RUN
ELK LICK RD
ELKLICK RUN
GUM SPRING RD
FOLEY BRANCH
N
Service Area
LOUDOUN WATER
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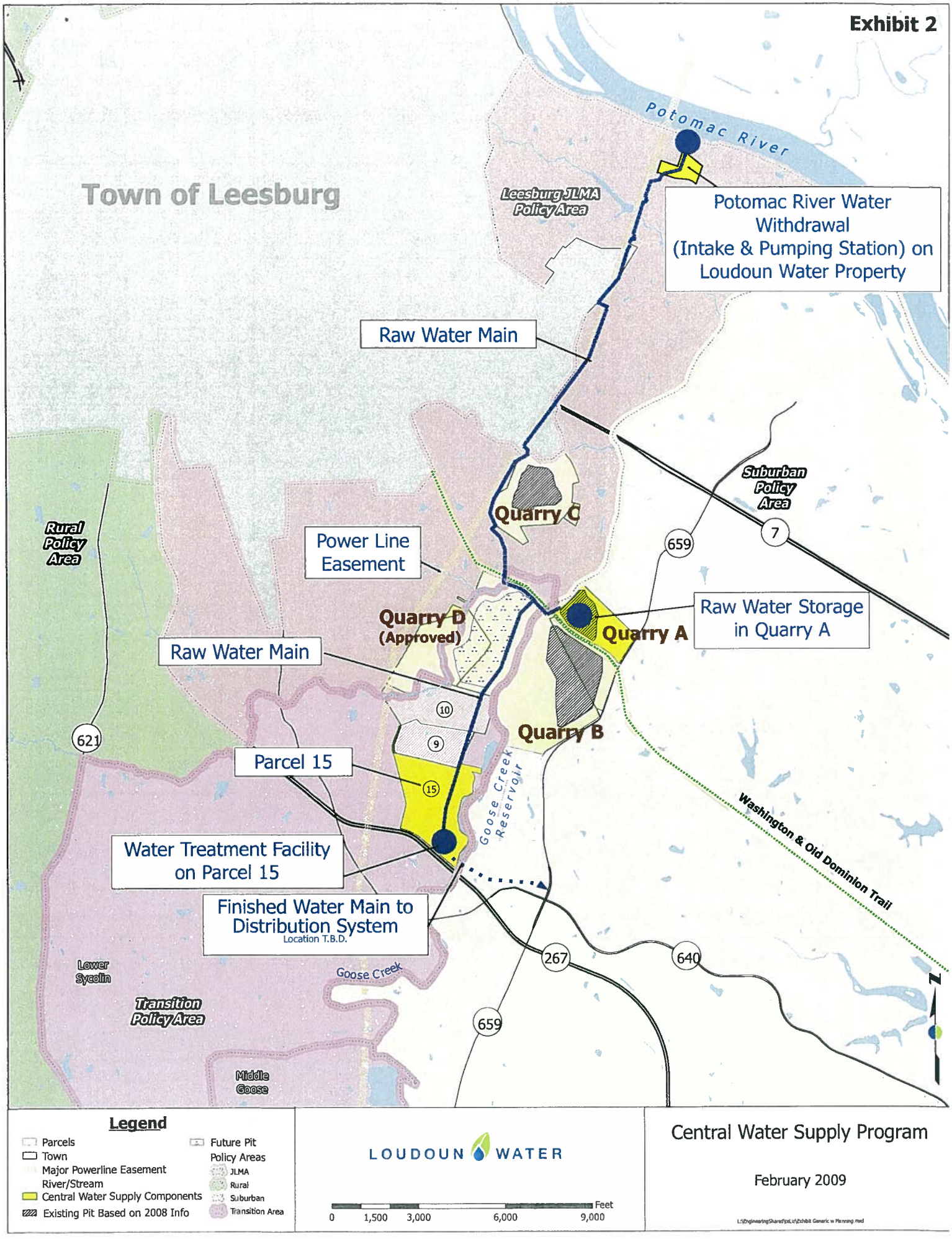
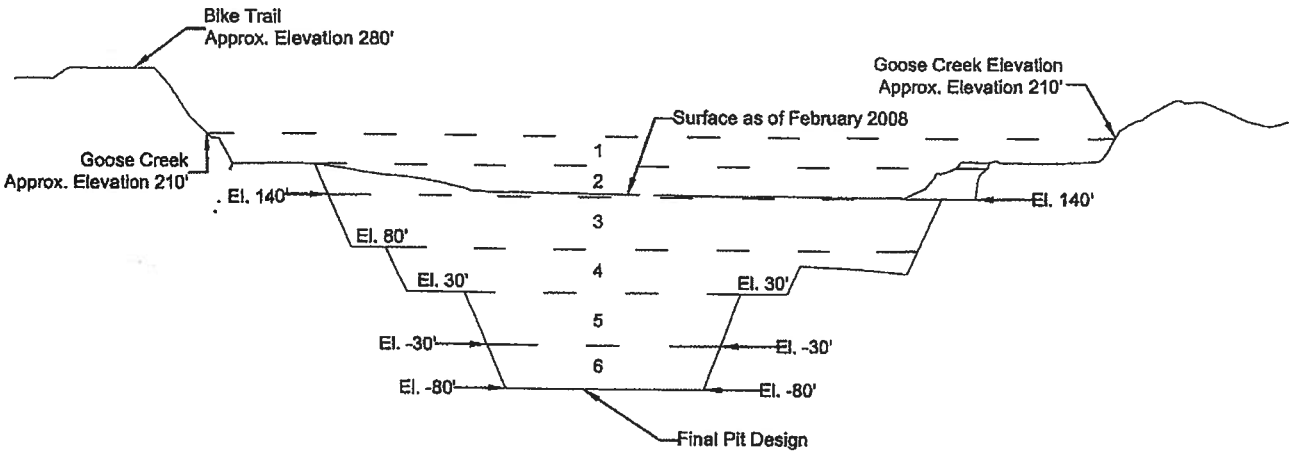


Exhibit 2
Potomac River
Town of Leesburg
Leesburg JLMA Policy Area
Potomac River Water Withdrawal (Intake & Pumping Station) on Loudoun Water Property
Raw Water Main
Suburban Policy Area
Quarry C
Rural Policy Area
Power Line Easement
659
7
Quarry D (Approved)
Quarry A
Raw Water Storage in Quarry A
Raw Water Main
10
Quarry B
621
9
Parcel 15
15
Goose Creek Reservoir
Washington & Old Dominion Trail
Water Treatment Facility on Parcel 15
Finished Water Main to Distribution System
Location T.B.D.
267
640
Lower Sycolin
Goose Creek
Transition Policy Area
659
Middle Goose
N
Legend
Parcels
Town
Major Powerline Easement
River/Stream
Central Water Supply Components
Existing Pit Based on 2008 Info
Future Pit
Policy Areas
JLMA
Rural
Suburban
Transition Area
LOUDOUN WATER
0
1,500
3,000
6,000
9,000
Feet
Central Water Supply Program
February 2009

Reserves and Water Volume by Lift			
Section	Lift	Volume (cu. ft)	Volume (gallons)
1	210 to 176	38,915,500	291,087,940
2	176 to 140	29,257,000	218,842,360
3	140 to 80	37,085,000	277,395,800
4	80 to 30	23,298,500	174,272,780
5	30 to -30	15,201,000	113,703,480
6	-30 to -80	8,862,000	66,287,760
Total		152,619,000	**1,141,590,120**

EXHIBIT 3



QUARRY "A"
ILLUSTRATIVE MINE PLAN